



U.S. Department  
of Transportation  
**Pipeline and  
Hazardous Materials  
Safety Administration**

**IAEA CERTIFICATE OF COMPETENT AUTHORITY  
SPECIAL FORM RADIOACTIVE MATERIALS  
CERTIFICATE USA/0458/S-96, REVISION 4**

400 Seventh Street, S.W.  
Washington, D.C. 20590

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency<sup>1</sup> and the United States of America<sup>2</sup> for the transport of radioactive material.

1. Source Identification - Neutron Products, Inc. Model NPRP 450-10-B.
2. Source Description - Cylindrical double encapsulation made of Type 316L stainless steel with fusion seal welded endcaps. Approximate outer dimensions are 11.1 mm (0.437 in.) in diameter and 451.5 mm (17.777 in.) in length. Construction shall be in accordance with attached Neutron Products, Inc. Drawing No. A-20035, Rev. A, or Neutron Products, Inc. Drawing No. A-20035, Rev. B.
3. Radioactive Contents - Source capsules manufactured in accordance with Neutron Products, Inc. Drawing No. A-20035, Rev. A, shall contain no more than 445 TBq (12,000 Ci) of Cobalt-60. Source capsules manufactured in accordance with Neutron Products, Inc. Drawing No. A-20035, Rev. B, shall contain no more than 500 TBq (13,500 Ci) of Cobalt-60. The Co-60 is in the form of solid metal rods.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations<sup>1</sup> shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the applicable requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on March 30, 2012.

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<sup>1</sup> "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency(IAEA), Vienna, Austria.

<sup>2</sup> Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

**CERTIFICATE USA/0458/S-96, REVISION 4**


This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the March 02, 2007 petition by Neutron Products, Inc., Dickerson, MD, and in consideration of other information on file in this Office.

Certified By:



**Mar 08 2007**

(DATE)

 Bob Richard

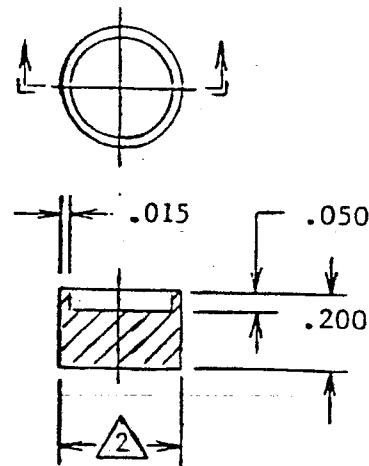
Deputy Associate Administrator for Hazardous Materials Safety

Revision 4 - Issued to renew the expiration date.

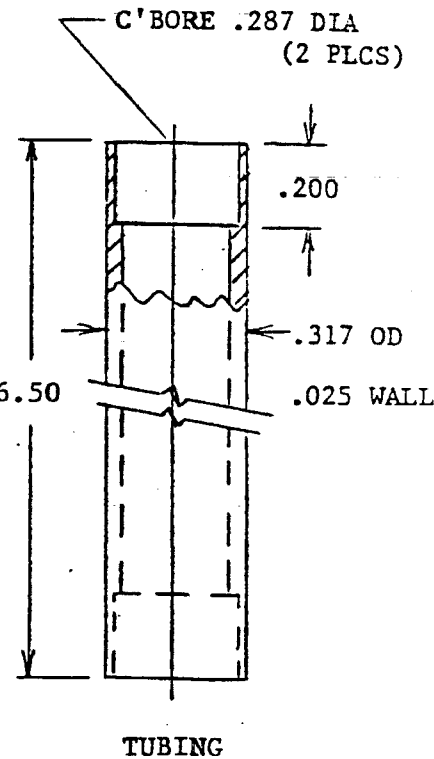
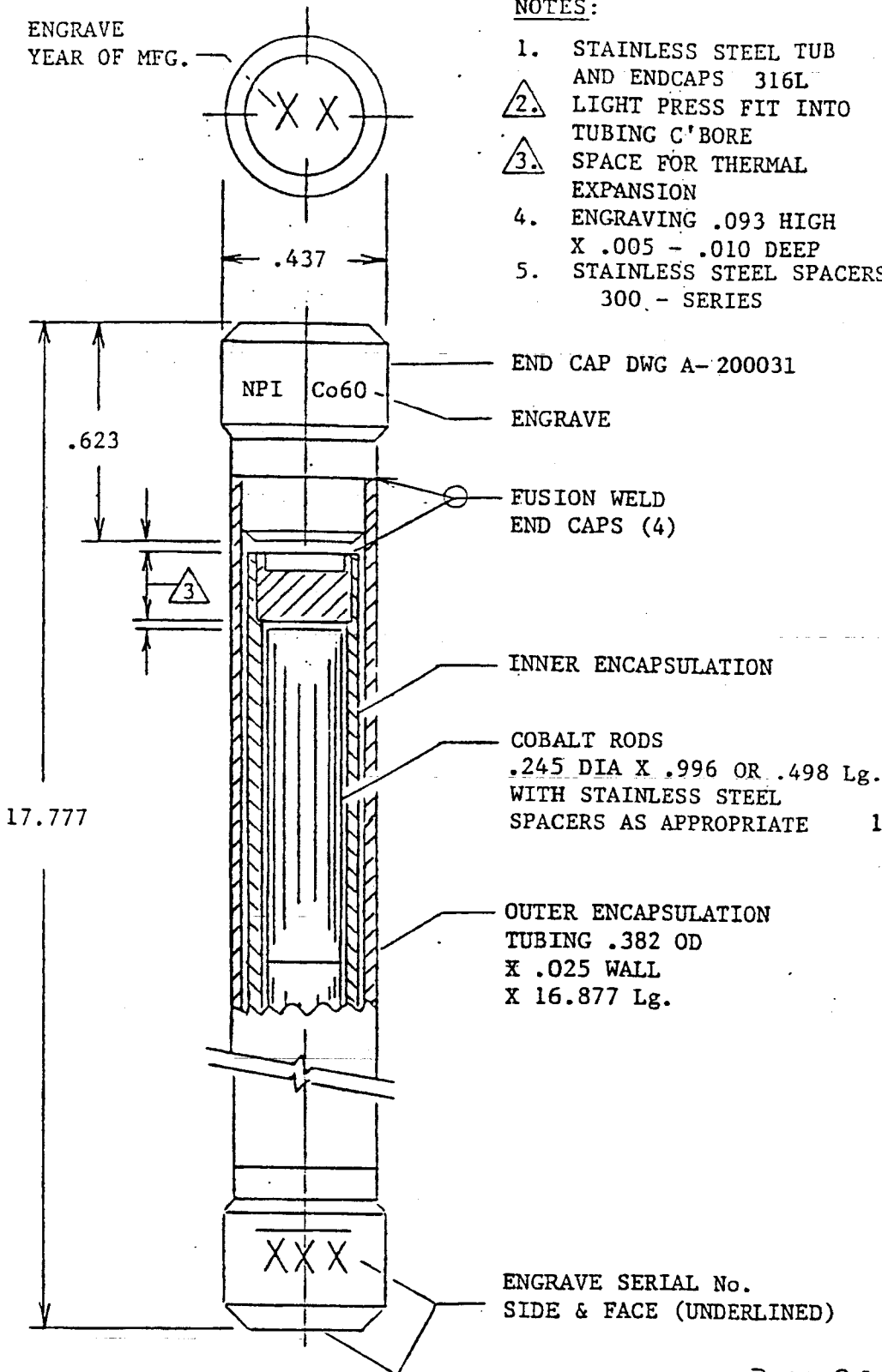
ENGRAVE  
YEAR OF MFG.

NOTES:

1. STAINLESS STEEL TUB AND ENDCAPS 316L
2. LIGHT PRESS FIT INTO TUBING C'BORE
3. SPACE FOR THERMAL EXPANSION
4. ENGRAVING .093 HIGH X .005 - .010 DEEP
5. STAINLESS STEEL SPACERS 300 - SERIES



END CAPS (2 REQ)



TUBING

INNER ENCAPSULATION

3-10-95 0 B 50 L E T E S E E R E F

NEUTRON PRODUCTS inc

Dickerson, Maryland

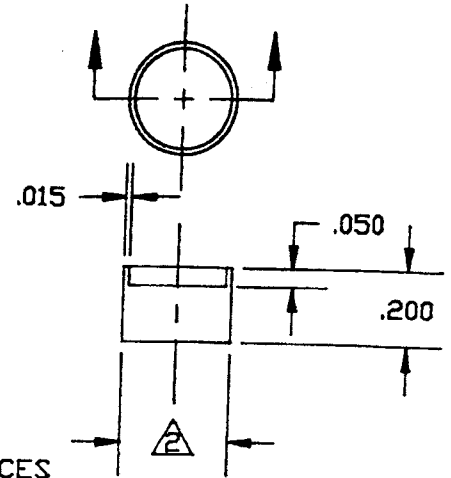
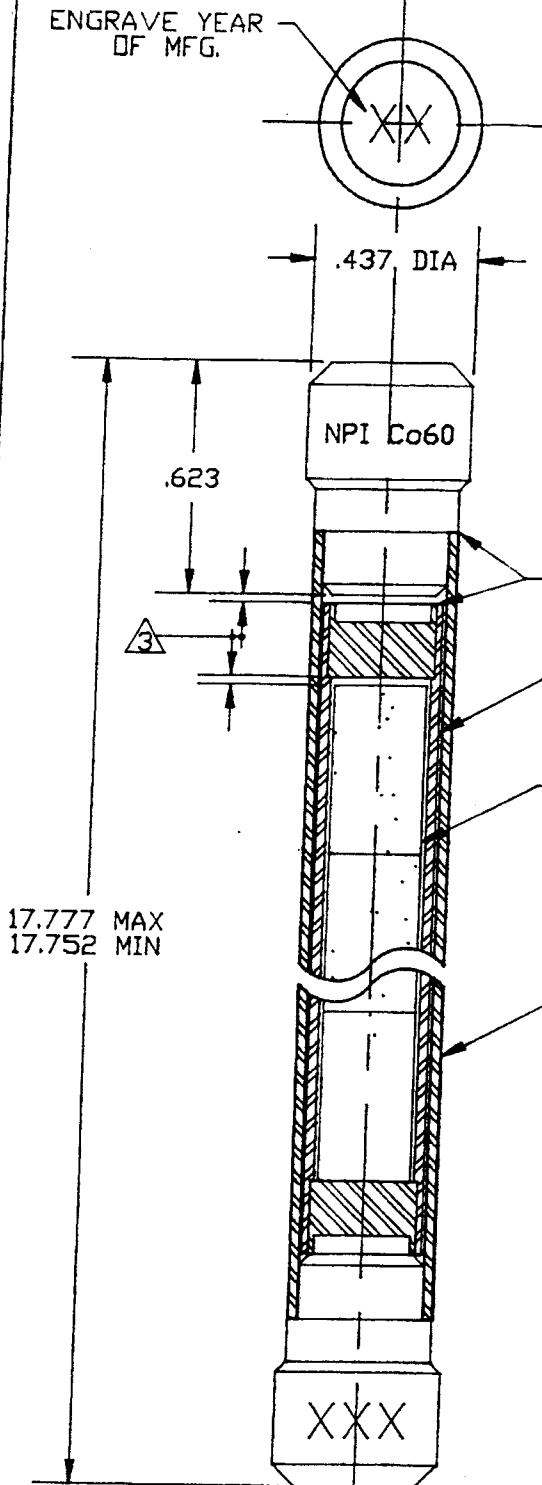
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
TOLERANCES		
ANGULAR	DECIMAL	FRACTIONAL
DRAWN	ED 11-20-90	
DESIGN	FS 11-20-90	
CHECKED	<i>PR</i>	

TITLE	APPROVED	ISSUED DATE
RADIATION PROCESSING	<i>PR</i>	11/21/90
SOURCE	SIZE	DWG. NO.
NPRP 450-10-B	A	200355
	SCALE	2X

REV.	SHEET
A	1
21/1/92	

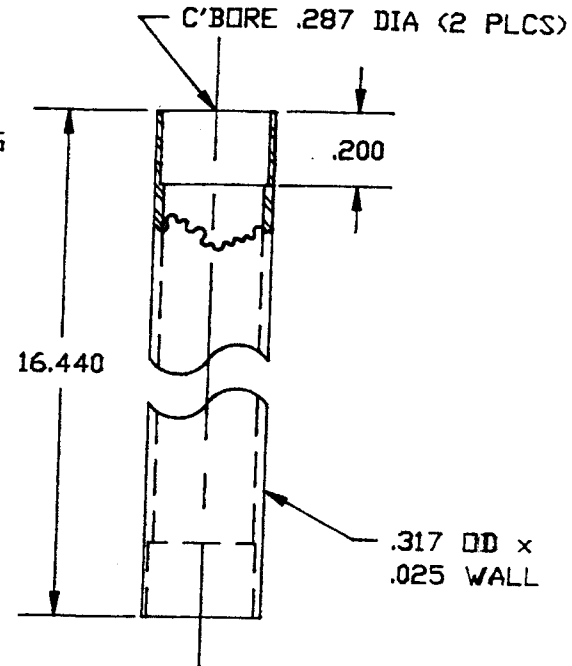
**NOTE:**

1. STAINLESS STEEL TUBING AND END CAPS - 316L
2. LIGHT PRESS FIT INTO TUBING C'BORE
3. SPACE FOR THERMAL EXPANSION
4. ENGRAVING .093 HIGH x .005 - .010 DEEP
5. STAINLESS STEEL SPACERS 300 SERIES
6. DIMENSIONS ARE NOMINAL SEE DWG C-200359 (COMPONENTS) FOR TOLERANCES AND ENGRAVING DETAILS



**END CAP  
INNER ENCAPSULATION**

(2 REQ'D)



**TUBING  
INNER ENCAPSULATION**

REVISED 3-10-95 BY JG-CHECKED BY F.S.

REVISIONS 3-15-75 21-36-CHECKED BY P.S.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			NEUTRON PRODUCTS INC					
TOLERANCES			TITLE  RADIATION PROCESSING SOURCE  NPRP 450-10-B		APPROVED		ISSUED DATE	
ANGULAR	DECIMAL	FRACTIONAL			FS		11/21/90	
±3°	.XX=±.01	.XXX=±.005			SIZE		DWG. NO.	
DRAWN	ED 11-20-90				A		200355	
DESIGN	ED 11-20-90				SCALE		SHEET	
CHECKED	FS				2X		1 OF 1	



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400 Seventh Street, S.W.  
Washington, D.C. 20590

**CERTIFICATE NUMBER:** USA/0458/S-96, Revision 4

**ORIGINAL REGISTRANT(S):**

Mr. Marvin Turkanis  
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Dickerson, 20842  
USA

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